

Amendments to the Claims:

1. (Currently amended) A method of determining a field-weighted score for a document having multiple fields relative to a query having a plurality of query terms, the method comprising:

determining fields of the document, wherein each field includes a contextual section of the document based on the document structure;

determining a field weight for each of the determined fields, wherein the field weight corresponds to a number of times for replicating the content of each of the determined fields;

replicating the content of each of the determined fields the number of times indicated by the field weight for each of the determined fields, wherein the replicated content of each field is concatenated into a field set for each of the determined fields;

~~replicating the content of each field of the document a number of times indicated by a field weight corresponding to the field to produce an individual field set corresponding to each field in the document;~~

combining each concatenated field set for each field of the document ~~into~~ to generate a virtual document including each concatenated field set for each field of the document;

indexing the virtual document to produce a virtual document statistics; and

computing the field-weighted score from the virtual document index based on the query.

2. (Original) The method of claim 1 wherein the query is associated with a search and the field-weighted score represents a level of relevance of the document to the query.

3. (Previously presented) The method of claim 1 wherein each field weight is represented by an integer value and the replicating operation comprises:

generating each field set to include a number of copies of a field of the document, wherein the number of copies equals the integer value.

4. (Cancelled)

5. (Previously presented) The method of claim 1 wherein the combining operation comprises:

concatenating each field set into the virtual document.

6. (Previously presented) The method of claim 1 wherein the computing operation comprises:

computing a field-weighted document weight for each query term in the query from the virtual document statistics.

7. (Previously presented) The method of claim 1 wherein the computing operation comprises:

computing a field-weighted document weight for each query term in the query from the virtual document statistics; and

computing the field-weighted score based on the field-weighted document weight for each query term.

8. (Previously presented) The method of claim 1 further comprising:

ranking the field-weighted score with field-weighted scores of other documents.

9. (Currently amended) A computer-readable storage medium having computer executable instructions ~~program product encoding a computer program for executing on a computer system a computer process~~ for determining a field-weighted score for a document having multiple fields relative to a query having a plurality of query terms, the instructions ~~computer process~~ comprising:

determining fields of the document, wherein each field includes a contextual section of the document based on the document structure;

determining a field weight for each of the determined fields, wherein the field weight corresponds to a number of times for replicating the content of each of the determined fields;

replicating the content of each of the determined fields the number of times indicated by the field weight for each of the determined fields, wherein the replicated content of each field is concatenated into a field set for each of the determined fields;

~~replicating the content of each field of the document a number of times indicated by a field weight corresponding to the field to produce an individual field set corresponding to each field in the document;~~

combining each concatenated field set for each field of the document ~~into~~ to generate a virtual document including each concatenated field set for each field of the document;

indexing the virtual document to produce a virtual document statistics; and

computing the field-weighted score from the virtual document index based on the query.

10. (Currently amended) The ~~computer program product~~ computer-readable storage of claim 9 wherein the query is associated with a search and the field-weighted score represents a level of relevance of the document to the query.

11. (Currently amended) The ~~computer program product~~ computer-readable storage of claim 9 wherein each field weight is represented by an integer value and the replicating operation comprises:

generating each field set to include a number of copies of a field of the document, wherein the number of copies equals the integer value.

12. (Cancelled)

13. (Currently amended) The ~~computer program product~~ computer-readable storage medium of claim 9 wherein the combining operation comprises:

concatenating each field set into the virtual document.

14. (Currently amended) The ~~computer program product~~ computer-readable storage medium of claim 9 wherein the computing operation comprises:

computing a field-weighted document weight for each query term in the query from the virtual document statistics.

15. Currently amended) The ~~computer program product~~ computer-readable storage medium of claim 9 wherein the computing operation comprises:

computing a field-weighted document weight for each query term in the query from the virtual document statistics; and

computing the field-weighted score based on the field-weighted document weight for each query term.

16. (Currently amended) The ~~computer program product~~ computer-readable storage medium of claim 9 further comprising:

ranking the field-weighted score with field-weighted scores of other documents.

17. (Currently amended) A method of determining a field-weighted score for a document having multiple fields relative to a query having a plurality of query terms, the method comprising:

determining fields of the document, wherein each field includes a contextual section of the document;

determining a field-specific term frequency for each of the determined fields ~~field~~ in the document for each query term;

weighting each field-specific term frequency according to a field weight designated for the ~~corresponding~~ field to compute a field-weighted term frequency for each query term, wherein the field weight is different between fields, wherein the field weight indicates the relevance of the field in the document based on a query type;

computing a field-weighted document weight for each query term based on the field-weighted term frequency for each query term; and

computing the field-weighted score as a function of the field-weighted document weight of all query terms.

18. (Original) The method of claim 17 wherein the query is associated with a search and the field-weighted score represents a level of relevance of the document to the query.

19. (Previously presented) The method of claim 17 further comprising:

computing a field-weighted document length based on a field weight for each field and a field length for each field, wherein the operation of computing a field-weighted document weight comprises computing a field-weighted document weight for each query term based on the field-weight term frequency for each query term and the field-weighted document length.

20. (Previously presented) The method of claim 17 further comprising:

computing a field-weighted document length based on a field weight for each field and a field length for each field by summing at least one weighted field lengths of the fields in the document, each weighted field length being a field length weighted by a corresponding field weight.

21. (Previously presented) The method of claim 17 further comprising:

computing a field-weighted document length based on a field weight for each field and a field length for each field by summing at least one weighted field length of the fields in the document, each weighted field length being a field length weighted by a corresponding field weight, wherein the operation of computing a field-weighted document weight comprises computing a field-weighted document weight for each query term based on the field-weight term frequency for each query term and the field-weighted document length.

22. (Previously presented) The method of claim 17 wherein the determining operation comprises:

determining the field-specific term frequency for each field from document statistics associated with the document, the document statistics including a field-weighted term frequency for at least one query term in the document.

23. (Previously presented) The method of claim 17 wherein the determining operation comprises:

determining the field length for each field from document statistics associated with the document.

24. (Previously presented) The method of claim 17 wherein the operation of computing a field-weighted document weight comprises:

summing at least one weighted field-specific term frequency of the fields in the document.

25. (Previously presented) The method of claim 17 further comprising:

ranking the field-weighted score with field-weighted scores of other documents.

26. (Currently amended) A computer-readable storage medium having computer executable instructions ~~computer program product encoding a computer program for executing on a computer system a computer process~~ for determining a field-weighted score for a document having multiple fields relative to a query having a plurality of terms, the instructions ~~computer process~~ comprising:

determining fields of the document, wherein each field includes a contextual section of the document;

determining a field-specific term frequency for each of the determined fields ~~field~~ in the document for each query term;

weighting each field-specific term frequency according to a field weight designated for the ~~corresponding~~ field to compute a field-weighted term frequency for each query term, wherein the field weight is different between fields, wherein the field weight indicates the relevance of the field in the document based on a query type;

computing a field-weighted document weight for each query term based on the field-weighted term frequency for each query term; and

computing the field-weighted score as a function of the field-weighted document weight of all query terms.

27. (Currently amended) The computer-readable storage medium ~~computer program~~ product of claim 26 wherein the query is associated with a search and the field-weighted score represents a level of relevance of the document to the query.

28. (Currently amended) The computer-readable storage medium ~~computer program~~ product of claim 26 wherein the computer process further comprises:

computing a field-weighted document length based on a field weight for each field and a field length for each field, wherein the operation of computing a field-weighted document weight comprises computing a field-weighted document weight for each query term based on the field-weight term frequency for each query term and the field-weighted document length.

29. (Currently amended) The computer-readable storage medium ~~computer program~~ product of claim 26 wherein the computer process further comprises:

computing a field-weighted document length based on a field weight for each field and a field length for each field by summing at least one weighted field lengths of the fields in the document, each weighted field length being a field length weighted by a corresponding field weight.

30. (Currently amended) The computer-readable storage medium ~~computer program~~ product of claim 26 wherein the computer process further comprises:

computing a field-weighted document length based on a field weight for each field and a field length for each field by summing at least one weighted field lengths of the fields in the document, each weighted field length being a field length weighted by a corresponding field weight, wherein the operation of computing a field-weighted document weight comprises computing a field-weighted document weight for each query term based on the field-weight term frequency for each query term and the field-weighted document length.

31. (Currently amended) The computer-readable storage medium ~~computer program~~ product of claim 26 wherein the determining operation comprises:

determining the field-specific term frequency for each field from document statistics associated with the document, the document statistics including a field-weighted term frequency for at least one query term in the document.

32. (Currently amended) The computer-readable storage medium ~~computer program~~ ~~product~~ of claim 26 wherein the determining operation comprises:

determining the field length for each field from document statistics associated with the document.

33. (Currently amended) The computer-readable storage medium ~~computer program~~ ~~product~~ of claim 26 wherein the operation of computing a field-weighted document weight comprises:

summing at least one weighted field-specific term frequency of the fields in the document.

34. (Currently amended) The computer-readable storage medium ~~computer program~~ ~~product~~ of claim 26 further comprising:

ranking the field-weighted score with field-weighted scores of other documents.

35. (Currently amended) A system for determining a field-weighted score for a document having multiple fields relative to a query having a plurality of terms, the system comprising:

a field-weighted term frequency calculator that determines a field-specific term frequency for each field in the document for each query term, wherein each field includes a contextual section of the document, wherein and weights each field-specific term frequency is weighted according to a field weight identified for the corresponding field to compute a field-weighted term frequency for each query term, wherein the field weight is different for the fields, wherein the field weight indicates the relevance of the field in the document based on the query type;

a field-weighted document weight calculator that computes a field-weighted document weight for each query term based on the field-specific term frequency for each query term; and

a document score calculator that computes the field-weighted score as a function of the field-weighted document weight of all query terms.

36. (Original) The system of claim 35 wherein the query is associated with a search and the field-weighted score represents a level of relevance of the document to the query.

37. (Previously presented) The system of claim 35 further comprising:

a field-weighted document length calculator that computes a field-weighted document length based on a field weight for each field and a field length for each field, wherein the field-weighted document weight calculator computes a field-weighted document weight for each query term based on the field-weight term frequency for each query term and the field-weighted document length.

38. (Currently amended) A method of determining a field-weighted score for a document having multiple fields relative to a query having a plurality of query terms, the method comprising:

determining fields of the document, wherein each field includes a contextual section of the document;

computing a field-weighted term frequency for each query term based on field weights designated for individual fields in the document, wherein the field weight is different for the fields, wherein the field weights indicate the relevance of the field in the document based on the query type;

computing a field-weighted document weight for each query term based on the field-weighted term frequency for each field in the document; and

computing the field-weight score as a function of the field-weighted document weights of the query terms.

39. (Previously presented) The method of claim 38 further comprising:

computing a field-weighted document length based on a field weight for each field and a field length for each field, wherein the operation of computing a field-weighted document weight

comprises computing a field-weighted document weight for each query term based on the field-weight term frequency for each query term and the field-weighted document length.

40. (Previously presented) The method of claim 38 wherein computing a field-weighted document weight comprises:

computing the field-weighted document weight using a field-weighted free parameter of a BM25 function, the field-weighted free parameter being based on a corresponding optimized free parameter computed in a non-field-weighted configuration.

41. (Previously presented) The method of claim 38 wherein computing a field-weighted document weight comprises:

computing the field-weighted document weight using a field-weighted free parameter of a BM25 function, the field-weighted free parameter being based on an average term frequency over all terms in a non-field-weighted configuration, an average term frequency over all terms in a field-weighted configuration, and a corresponding optimized free parameter computed in the non-field-weighted configuration.

42. (Previously presented) The method of claim 38 wherein computing a field-weighted document weight comprises:

computing the field-weighted document weight using a factor reflecting a dependence on a number of the fields in the document in which a query term occurs.

43. (Previously presented) The method of claim 38 wherein computing a field-weighted score comprises:

computing the field-weighted score using a factor reflecting a dependence on which field in the document includes the most query terms.

44. (Currently amended) A computer-readable storage medium ~~computer program~~
~~product encoding a computer program for executing on a computer system a computer process~~

for determining a field-weighted score for a document having multiple fields relative to a query having a plurality of query terms, the instructions ~~computer process~~ comprising:

determining fields of the document, wherein each field includes a contextual section of the document;

computing a field-weighted term frequency for each query term based on field weights designated for individual fields in the document, wherein the field weight is different for the fields, wherein the field weights indicate the relevance of the field in the document based on the query type;

computing a field-weighted document weight for each query term based on the field-weighted term frequency for each field in the document; and

computing the field-weight score as a function of the field-weighted document weights of the query terms.

45. (Currently amended) The computer-readable storage medium ~~computer program product~~ of claim 44 wherein the computer process further comprises:

computing a field-weighted document length based on a field weight for each field and a field length for each field, wherein the operation of computing a field-weighted document weight comprises computing a field-weighted document weight for each query term based on the field-weight term frequency for each query term and the field-weighted document length.

46. (Currently amended) The computer-readable storage medium ~~computer program product~~ of claim 44 wherein computing a field-weighted document weight comprises:

computing the field-weighted document weight using a field-weighted free parameter of a BM25 function, the field-weighted free parameter being based on a corresponding optimized free parameter computed in a non-field-weighted configuration.

47. (Currently amended) The computer-readable storage medium ~~computer program product~~ of claim 44 wherein computing a field-weighted document weight comprises:

computing the field-weighted document weight using a field-weighted free parameter of a BM25 function, the field-weighted free parameter being based on an average term frequency

over all terms in a non-field-weighted configuration, an average term frequency over all terms in a field-weighted configuration, and a corresponding optimized free parameter computed in the non-field-weighted configuration.

48. (Currently amended) The computer-readable storage medium ~~computer program~~ product of claim 44 wherein computing a field-weighted document weight comprises:

computing the field-weighted document weight using a factor reflecting a dependence on a number of the fields in the document in which a query term occurs.

49. (Currently amended) The computer-readable storage medium ~~computer program~~ product of claim 44 wherein computing a field-weighted score comprises:

computing the field-weighted score using a factor reflecting a dependence on which field in the document includes the most query terms.

50. (Currently amended) A system for determining a field-weighted score for a document having multiple fields relative to a query having a plurality of query terms, the system comprising:

a field-weighted term frequency calculator that computes a field-weighted term frequency for each query term based on field weights designated for individual fields in the document, wherein the field weight is different for the fields, wherein the field weights indicate the relevance of the field in the document based on the query type;

a field-weighted document weight calculator that computes a field-weighted document weight for each query term based on the field-weighted term frequency for each field in the document; and

a search engine that computes the field-weighted score as a function of the field-weighted document weights of the query terms.

51. (Previously presented) The system of claim 50 further comprising:

a field-weighted document length calculator that computes a field-weighted document length based on a field weight for each field and a field length for each field, wherein the field-

weighted document weight calculator computes a field-weighted document weight for each query term based on the field-weight term frequency for each query term and the field-weighted document length.